TPA 12: Object Recognition using Deep Learning on the ImageNET dataset

January 20, 2016

Problem Statement: Object recognition on a large database using Deep Learning techniques.

Input:

- An object will be given from a known class on which your CNN is training trained.

Expected Output:

- Identify the class Id of the Object guven as input

Hint for excellence: *Special Credit will be given if the designed system could able to train on the new classes of objects that may be provided to it.*

Additional Material: Dataset will be provided

References

1. Krizhevsky, Alex, Ilya Sutskever, and Geoffrey E. Hinton. "Imagenet classification with deep convolutional neural networks." Advances in neural information processing systems. 2012.

2. Deng, J., Dong, W., Socher, R., Li, L.J., Li, K. and Fei-Fei, L., 2009, June. Imagenet: A large-scale hierarchical image database. In Computer Vision and Pattern Recognition, 2009. CVPR 2009. IEEE Conference on (pp. 248-255). IEEE

3. Snchez, J., Perronnin, F., Mensink, T. and Verbeek, J., 2013. Image classification with the fisher vector: Theory and practice. International journal of computer vision, 105(3), pp.222-245.

4. Donahue, J., Jia, Y., Vinyals, O., Hoffman, J., Zhang, N., Tzeng, E. and Darrell, T., 2013. Decaf: A deep convolutional activation feature for generic visual recognition. arXiv preprint arXiv:1310.1531.